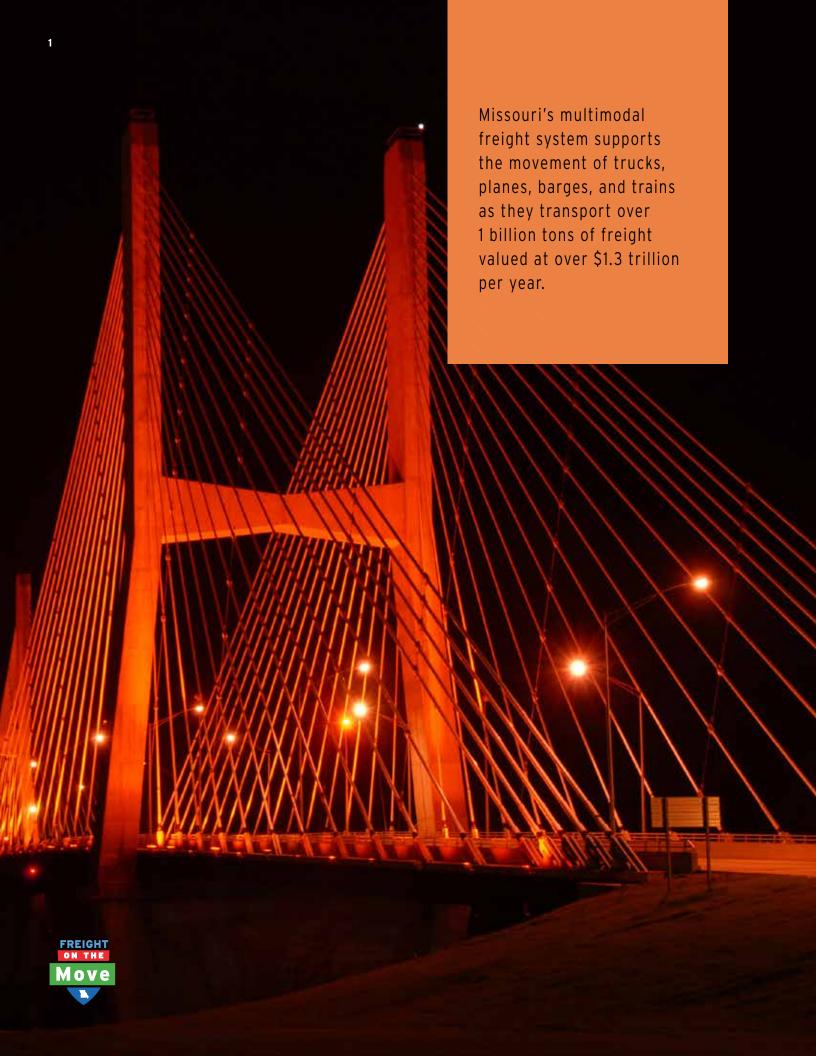


Missouri State Freight Plan

EXECUTIVE SUMMARY





EVERY DAY IS A FREIGHT DAY

IN MISSOURI

We're at the crossroads of the nation - and freight movement is vital to our State.

As a critical element in the Missouri economy, it is important to have a plan to make sure we keep freight - and the Missouri economy - moving smoothly.

It's through our freight transportation system that Missouri products like soybeans and aviation parts are transported around the world. Making smart investments in that system can help provide better options for Missouri businesses to get their products to markets. An improved freight transportation system can also lower transportation costs and create jobs.

While the good news is that Missouri has an integrated multimodal freight system that facilitates the efficient, reliable, and safe movement of freight, the challenge will be to maintain and expand the system to meet the needs of tomorrow.

Building on the Long Range Transportation Plan and with the help of hundreds of key stakeholders, MoDOT has drafted this vision and plan for taking care of its existing freight system and making the best and most strategic investments possible when funds are available.



Maintenance: Maintain the freight system in good condition by keeping highways and bridges in good condition and supporting the maintenance of railways, waterways, airports, and multimodal connections.

Safety: Improve safety on the freight system by decreasing the number and severity of crashes involving commercial vehicles and improving safety at railroad crossings.

Economy: Support economic growth and competitiveness in Missouri through strategic improvements to the freight system.

Connectivity and Mobility: Improve the connectivity and mobility of the freight system by reducing congestion and increasing reliability on the roadways; by supporting improved efficiency of rails, waterways, and airports; and by improving connections between freight modes.

MoDOT's Long Range Transportation Plan also includes three strategic considerations that have been incorporated in this Freight Plan:

Environmental: Reduce and/or mitigate the adverse environmental impacts of freight.

Organizational and Process: Institute policies and practices that support the freight system, such as exploring funding flexibility and stability and using technology to improve operations on the freight system.

Customers and Partners: Improve coordination and collaboration with freight stakeholders.

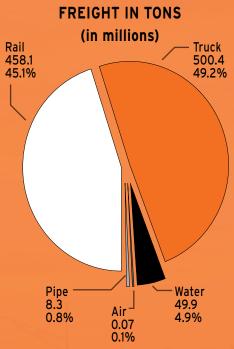
PLANNING FOR THE FUTURE

OF FREIGHT IN MISSOURI

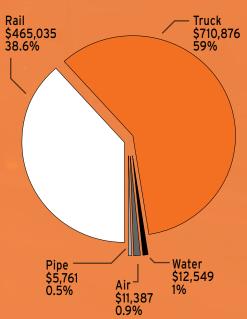
MoDOT developed this State Freight Plan through a collaborative process to assess Missouri's existing freight system, establish goals and strategies for updating the system over the next 10+ years, develop guidance for future investments in transportation, and prioritize freight projects that will provide the most economic benefits to the State.

Developing this plan not only meets the federal requirements outlined in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and aligns with the National Freight Goals, but is also well-timed to guide MoDOT leaders through the challenges of maintaining the existing freight infrastructure and investing in new projects to accommodate growing freight volumes transported throughout the State.





FREIGHT IN VALUE (in millions)



In Missouri, trucks transport the largest share of freight by weight and value, but are closely followed by rail.

Waterborne, air, and pipeline combined, comprise a minority of freight movements.

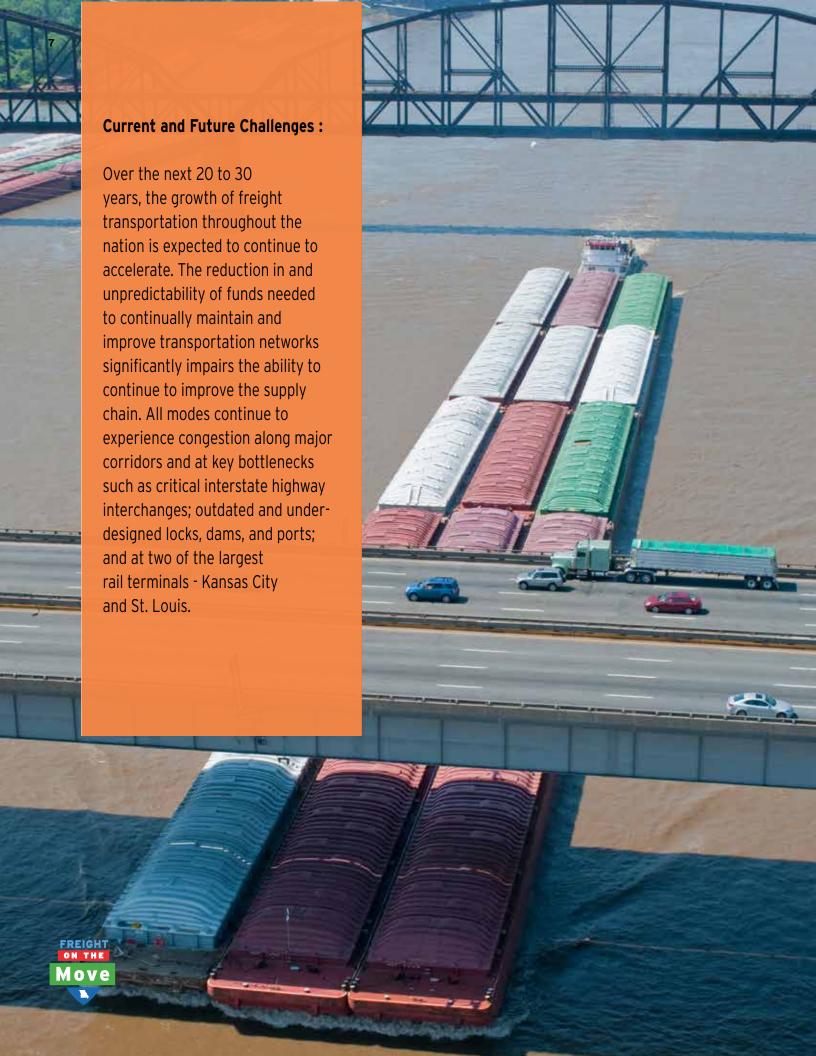
MISSOURI'S FREIGHT SYSTEM

CROSSROADS OF AMERICA

Missouri is at the freight crossroads of America. As the geographic center and the demographic center of population for the United States, Missouri is well positioned as the country's freight nexus.

Missouri does the heavy lifting every day for freight mobility - manufacturing, agriculture, mining, distribution, logistics and being the "connector" state which holds the region and the nation together.

Being a "connector" state means that the majority of freight moving across the state's transportation networks is truck- and rail-based pass-through traffic. The main commodities are rail-based coal and truckbased secondary traffic (i.e., transportation of goods to additional locations between the point of origin and final destination, such as warehouses or distribution centers). In 2011, nearly 600 million tons of pass-through freight moved through Missouri, making up nearly 59 percent of the total tonnage of goods moved in through the State. It is projected that the pass-through traffic will increase in the future, reinforcing the role of Missouri as a "connector" state.



th
largest highway
system in the U.S.

4,400

miles of class 1 main track rail lines

1050 miles of navigable rivers

of the top 106 cargo airports in North America

10,700 miles of pipelines

114

intermodal facilities

Missouri has the seventh largest highway system in the United States with 33,700 centerline miles of roadway. Missouri's major highways encompass just 20 percent of the State highway miles, but carry 80 percent of the system's traffic.

The State of Missouri has six Class 1 freight railroads operating 4,400 miles of main track rail lines and approximately 7,000 public and private rail-highway crossings within the State. A total of five short line railroads serve Missouri. These systems include a total of 450 track miles, ranging from 33 to 331 track miles per operator.

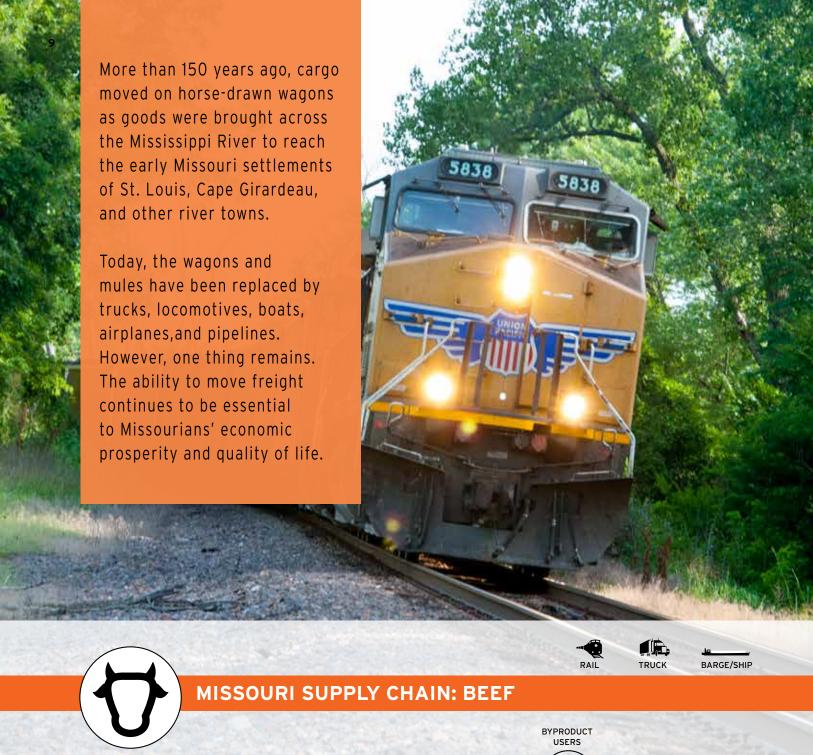
The State of Missouri contains 1,050 miles of navigable rivers. A total of 14 public ports and more than 200 private ports can be found along Missouri's waterways.

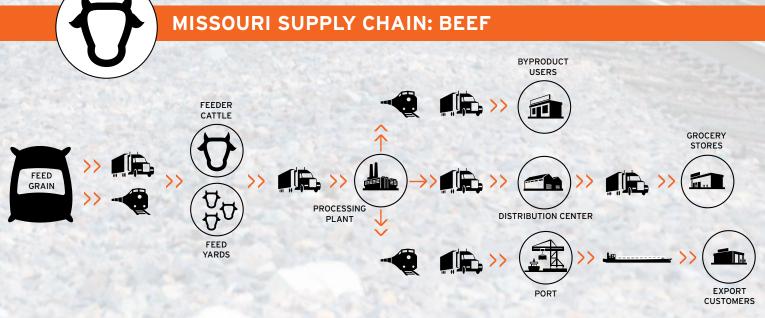
Missouri is home to three of the top 106 cargo airports in North America in terms of total tonnage in 2013: Kansas City (#37: 90 million kilos), St. Louis (#56: 64 million kilos) and Springfield (#106: 12 million kilos).

Approximately 10,700 miles of pipelines move natural gas, crude oil, and petroleum products throughout Missouri.

There are 114 intermodal facilities located in Missouri that provide a variety of intermodal interactions.

The majority of the intermodal facilities (73 percent) accommodate rail-truck commodity transfers followed by modal transfers at waterports (13 percent) and airports (9 percent).





ECONOMIC IMPACT OF FREIGHT

TO THE STATE OF MISSOURI

Freight is key to the State's economic prosperity because freight is the economy in motion. Efficient and reliable supply chains allow businesses to get the right products to the right people at the right time and at a reasonable cost. If freight stops, the economy stops.

Approximately half of Missouri's economy is substantially affected by freight, either by being directly involved in the movement of freight or by being a user of freight services. Everyone relies on freight on a daily basis. Freight movement and Missouri's freight system support the State's economy by:

- Allowing Missouri manufacturers to bring in raw materials and parts and transport products to and from other parts of the State and around the world.
- Allowing farmers and agricultural producers to get products to market and bring feed, seed, and equipment to their farms.
- Ensuring that the goods Missouri residents need are available in local stores or can be delivered to their homes.
- Directly employing approximately 83,500 people in Missouri's transportation and warehousing industries and numerous other industries indirectly.



ECONOMIC IMPACT OF FREIGHT

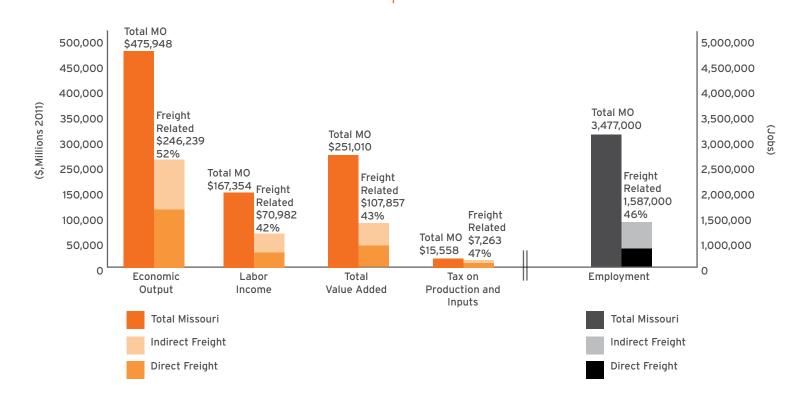
TO THE STATE OF MISSOURI

As the importance of trade and the demands of customers continue to evolve, Missouri companies often find freight an increasingly important factor in sustaining and enhancing their competitive position in the marketplace through reliable connections to customers and links to a multitude of markets to ensure timely deliveries of goods and services.

Currently, Missouri's freight system works well. A substantial amount of Missouri's freight activity occurs in the Kansas City and St. Louis metropolitian areas, and thus most of the bottlecks occur there. However, the severity of these bottlenecks is far less than bottlenecks in other areas across the U.S. Bottlenecks significantly impact freight transportation service providers and transportation users through lost hours by drivers and equipment stuck in congestion, the inability to meet delivery

and production schedules, and additional costs due to lack of reliability in the freight system. Strategizing ways to relieve those bottlenecks in the busy metro areas is important, but it's also important to keep in mind that valuable freight moves through every community in Missouri, so identifying and prioritizing the rural freight corridors and connectors is also a high priority.

So, while the current system does work well in the majority of cases and during the majority of the time, it's important to keep an eye to the future. By 2030, total freight tonnage moved along Missouri's freight system is estimated to increase 37 percent, with the largest growth estimated in air freight (91 percent increase) and truck freight (56 percent increase). With that kind of growth, a plan like this one is critical to keeping freight, and the economy, moving.



STAKEHOLDER OUTREACH

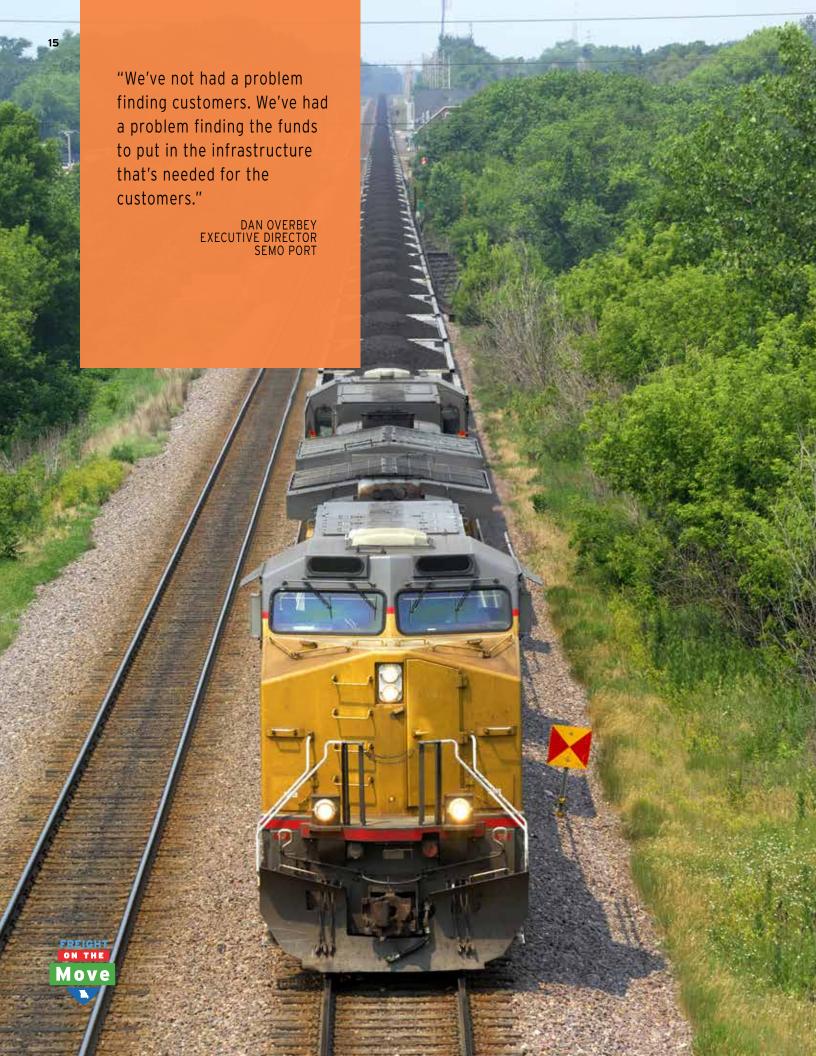
LISTENING TO MISSOURIANS

Hundreds of freight stakeholders were involved in helping MoDOT create this Freight Plan through outreach efforts focused on reaching logistics directors, carriers, shipping managers, economic development professionals, and leaders of private industry. Interacting with those that use the system was critical to learning about the conditions, issues, and needs of the freight network.

From November 2013 to July 2014, MoDOT engaged key freight stakeholders via surveys, interviews, multiple rounds of forums, and direct/grassroots outreach throughout the State. All activities were guided by the Freight Steering Committee made up of key stakeholders and MoDOT leadership. Stakeholder input influenced each piece of the Freight Plan, from the development of a prioritized project list to policy recommendations. This outreach process illustrates a unified effort by private and public stakeholders to develop a pragmatic freight mobility plan for Missouri.

The goals of stakeholder outreach were to:

- Better understand, as an agency and as a State, what the costs are to Missouri's economy if the freight network stagnates or deteriorates.
- Articulate what freight projects would be most helpful to the State if additional funds were made available.
- Collect thoughts on making businesses and communities more competitive - whether through improvement projects or policy changes.



STAKEHOLDER OUTREACH

LISTENING TO MISSOURIANS

Throughout the State and regionally several themes emerged during stakeholder outreach, including:

- Missouri generally has a well-connected road network. It is good until there is a hiccup such as congestion, weather, or construction. However, there is a need for capacity and maintenance improvements to maintain the reliability of the network interstates and minor routes.
- There is a need to integrate freight networks for better multimodal connectivity.
- There is a need to investigate ways to better use Missouri's waterways, including taking advantage of Panama Canal expansion opportunities, through increased dredging, and updating locks and dams on the Mississippi River.
- There is a need to actively engage and reach out to all stakeholders, both public and private.

PROGRAM RECOMMENDATIONS

FOR FREIGHT IN MISSOURI



Maintain and improve the designated Missouri Freight Network (page 30) to ensure the freight system continues to move toward achieving the transportation goals identified in the Missouri Long Range Transportation Plan and the Missouri State Freight Plan. Missouri needs to further evaluate alternative funding and financing sources to make certain the Missouri Freight System is preserved and maintained, and critical high priority improvements are implemented.



Use MoDOT's freight project prioritization framework to help decision-makers prioritize future investments on the freight network. The MoDOT freight prioritization process, developed as a part of this Freight Plan, provides a framework for evaluating and prioritizing key multimodal freight projects, using both quantitative and qualitative data and analysis. MoDOT should continue to expand the MoDOT Tracker performance measures and consider incorporating future data into the prioritization process, and should work with its modal offices to identify other freight data needed to support the prioritization process.



FREIGHT PROJECT PRIORITIZATION FRAMEWORK

INITIAL PROJECT LIST

CAPITAL OR MAJOR **MAINTENANCE?**

TIER 1-3 ON STATE FREIGHT **NETWORK?***

CONSISTENT WITH GOALS?

ENHANCE OR SUPPORT FREIGHT MOVEMENT?

STAKEHOLDER INPUT

DISTRICT REVIEW

UNDEFINED PROJECTS? 7+ YEARS **BEFORE**

PRIMARY **FREIGHT** CONSTRUCTION? INFRASTRUCTURE?

APPLY STAKEHOLDER WEIGHT GOALS AND PRIORITIZATION FILTERS

PRIORITIZED CANDIDATE LIST

*HIGHWAY PROJECTS ONLY

PROGRAM RECOMMENDATIONS

■ FOR FREIGHT IN MISSOURI



Expand ongoing collaboration with the Missouri Department of Economic Development (MDED) to address specific freight transportation needs of targeted industries. Identify clusters of targeted industries within the State and the transportation issues facing each industry sector. Work with MDED, Metropolitan Planning Organizations (MPOs), Regional Planning Organizations (RPOs), and regional economic development agencies to develop and fund projects that will address the transportation needs of these industry clusters.



Assist in developing freight and land use guidance to facilitate creation of freight supportive land use policies and guidelines to ensure practical freight considerations are incorporated in local planning and design efforts, promote good neighbor development strategies for freight facilities, and help communities and local government better understand how land use practices can improve freight and community development linkages.



Increase public awareness about economic development and freight. Education that clearly establishes the link between Missouri's freight system, the State's economy, and community sustainability is a key factor in future freight infrastructure funding.





Continue to engage the Missouri Chamber of Commerce, Missouri Economic Development Council (MEDC), Missouri Association of Manufacturers, private sector freight stakeholders, MPOs and RPOs, and related organizations to develop a public information exchange with MPOs, RPOs, planning organizations, economic development agencies, and other State, regional, and local groups about the role of freight transportation in the State and regional economy.

Host annual freight roundtable

Host an annual Freight and Economic Development Roundtable with MDED to enhance the exchange of information and communicate about current freight and economic development issues and opportunities.

Consider developing a rail publicprivate partnership

Consider developing a public-private partnership program to improve rail infrastructure, rail terminals, and rail-to-truck intermodal facilities for Class I, II, and III railroads for rail and intermodal facility improvements critical to the State that may not solely align with private investment criteria. Specifically MoDOT to assist to strengthen first and last mile connections.



PROGRAM RECOMMENDATIONS

FOR FREIGHT IN MISSOURI

Identify and preserve critical multimodal nodes

Identify and preserve critical multimodal freightintensive development nodes and adjoining industrial
land assets. This companion program to the Missouri
Certified Sites Program would focus on identifying and
preserving key locations where strategic multimodal
freight assets and available industrial land could be
reserved for future freight-intensive development such
as intermodal freight terminals and major manufacturing
facilities including aerospace, automotive, and similar
operations.

Partner with others involved in certified site program

Partner with agencies already involved in the certified site program, including MEDC and regional power utility firms. MoDOT freight staff and private transportation partners could provide geographic information system data and valuable information from the Freight Plan to be integrated with site and non-transportation infrastructure data.

PERFORMANCE MEASURES

AND COMPETITIVENESS METRICS

Performance measures are used across the transportation industry to evaluate transportation systems and agencies. MoDOT's rich history in performance measurement and management is best exemplified by Tracker, the department's quarterly performance measure publication.

For the Freight Plan, performance measures were established to assist with plan development, implementation, and accountability.

With Tracker as the foundation, and through consultation with the Freight Steering Committee, a limited number of strategic performance measures were identified for each of the four goals. These measures help inform the new project selection prioritization process by establishing how freight performance is and will be measured in Missouri.



FREIGHT PLAN GOAL:

MAINTENANCE:

Maintain the freight system in good condition

RECOMMENDED MEASURES:

- Percent of the major highways in good condition*
- Percent of structurally deficient deck area on NHS bridges*

SAFETY:

Improve safety on the freight system

- Number of commercial vehicle crashes resulting in fatalities and serious injuries*
- Rail crossing crashes and fatalities*

ECONOMY:

Support economic growth and competitiveness

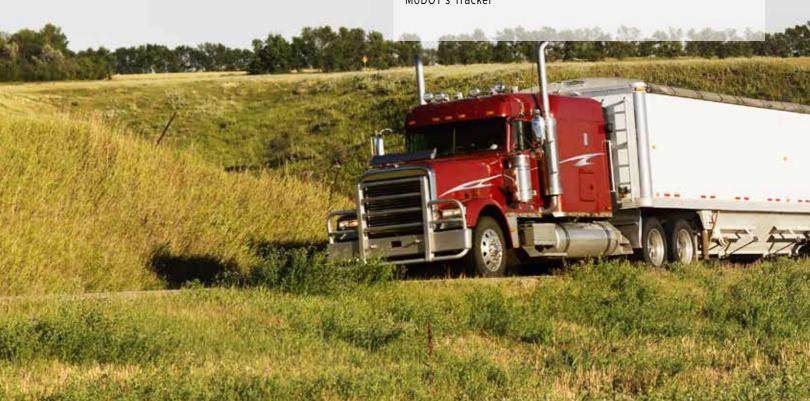
- Goods movement competitiveness*
- Job and economic growth by key sector including:

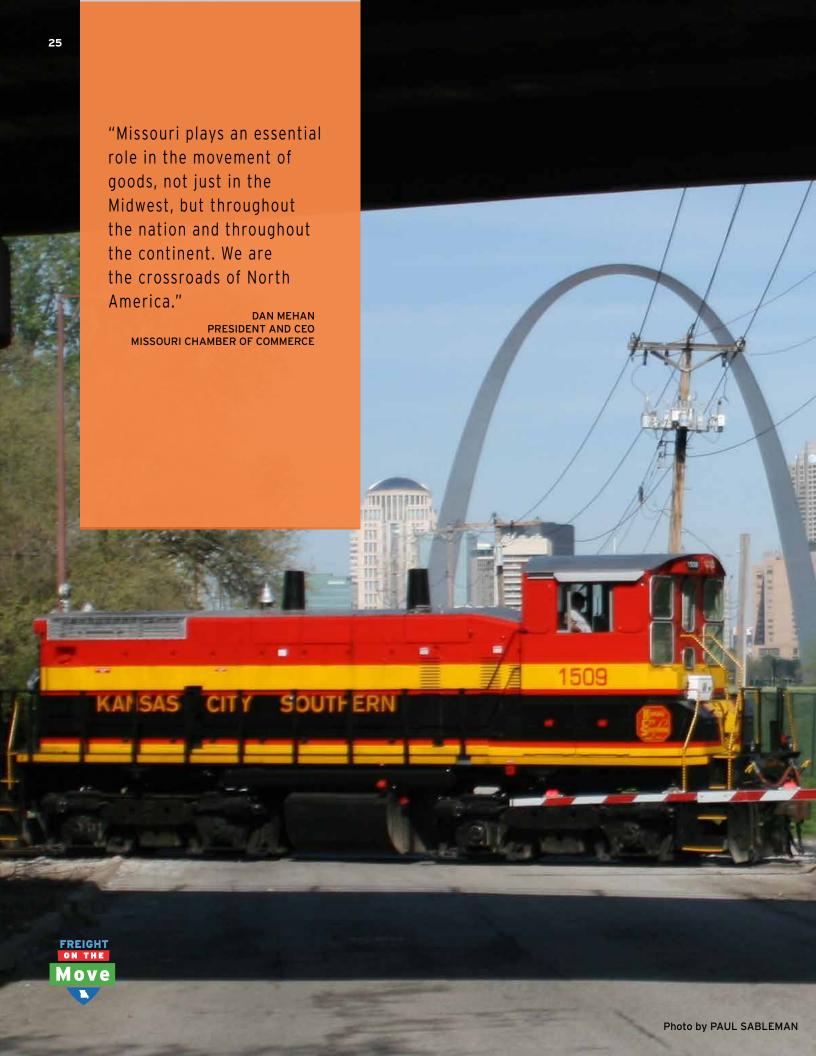
Agriculture Manufacturing Transportation/Logistics

CONNECTIVITY AND MOBILITY: Improve the connectivity and mobility of the freight system

- Freight tonnage by mode*
- Annual hours of truck delay*
- Truck reliability index*

^{*}These or similar measures have been established in MoDOT's Tracker





STRATEGIC POLICY RECOMMENDATIONS

Each of these recommendations is supported by a series of implementation tactics, designed as a potential to-do list for MoDOT and its freight partners. Many of the tactics are long-term solutions, but several are immediately actionable.

- Work with MoDOT internal and external partners to improve multimodal connectivity
- Focus on maintaining a state of good repair
- Cultivate a long-term focus to develop comprehensive freight corridors
- Take a pragmatic approach to highway system capacity expansion, given financial constraints
- · Improve the availability of truck parking
- Enhance the resiliency of the multimodal freight system
- Improve multimodal safety
- Improve the health, safety, and welfare of truck drivers
- Capitalize on the momentum created by this Freight Plan and outreach to key stakeholders
- Invest in freight infrastructure to drive longterm job creation
- Enhance Missouri's ability to export goods
- Expand interagency collaboration and coordination
- Use technology to improve freight movement
- Develop opportunities for maritime and air cargo



MISSOURI'S FREIGHT SYSTEM

I ENSURING A STRONG FUTURE

With a growing population and a global increase in consumer demand, pressures on the nation's freight system are only going to increase. How will the State meet the needs of Missouri businesses that will continue to require an efficient multimodal freight system to serve their customers?

Through the development of the State Freight Plan, MoDOT has started to meet the challenge of planning for future investments in the State's freight system to ensure Missouri's economy is strong today and in the decades to come.

Missouri has long been a leader in innovative ideas; such as dedicated truck lanes, its business approach to developing transportation performance metrics, partnering on projects with the private sector and other regional states, and focusing on ways to ensure mobility for people and freight despite funding shortfalls. As it has done before, Missouri must continue to be a leader in innovation in order to address its future freight needs. Through the implementation of this plan, Missouri will rise to the challenge to strengthen its role in our nation's economy and to secure its place in the global markets.



MISSOURI FREIGHT NETWORK MAP



